

Control and Prevention of Malaria (CAP-Malaria) Thailand

Semi-Annual Progress Report (October 1, 2014 to March 31, 2015)

Last update April 30, 2015

Acronyms

ACT	Artemisinin Combination Therapy
ARM	Artemisinin Resistant Malaria
EDAT	Early Diagnosis and Appropriate Treatment
BCC	Behavioral Change Communication
BVBD	Bureau of Vector Borne Diseases
CAP-M or CAP-Malaria	Control and Prevention of Malaria Project
CI	Case Investigation
DHO	District Health Office
DOT	Directly Observe Treatment
FU	Follow-up
G2G	Government-to-Government
GF	Global Funds for AIDS, TB, and Malaria
GF-RAI	Global Funds – Regional Artemisinin Initiative
GF-SSF	Global Funds – Single Stream Fund (Round 10)
HE	Health Education
HF	Health Facility
HH	Household
HPH	Health Promotion Hospital
IEC	Information Education Content
IPC	Interpersonal Communication
ITN	Insecticide Treated Net
LLIN	Long-lasting Insecticide Treated Net
LQAS	Lot Quality Assurance Sampling
M1	Migrant who resides or work in Thailand for 6 months or more
M2	Migrant who resides or work in Thailand for less than 6 months
M&E	Monitoring and Evaluation
MC	Malaria Clinic
MMP	Mobile Migrant Population
MOPH	Ministry of Public Health
MP	Malaria Post
MPR	Malaria Positive Rate
MPW	Malaria Post Worker
MV	Migrant volunteers
NGO	Non-Profit Organization
<i>Pf</i>	<i>Plasmodium falciparum</i>
PHO	Provincial Health Office
PMI	President's Malaria Initiatives
<i>Pv</i>	<i>Plasmodium vivax</i>
Q	Implementation Quarter
QA	Quality Assurance
QC	Quality Control
RDMA	Regional Development Mission Asia
RDT	Rapid Diagnostic Test
SI	Strategic Information
SOPs	Standard Operating Procedures
SPAC	Strengthening Prevention and Control of Malaria
SPR	Slide Positive Rate
TA	Technical Assistance

TES	Therapeutic Efficacy Surveillance
TICA	Thailand International Cooperation Agency
TWC	Twin-Cities
URC	University Research Co., LLC.
USAID	United States Agency for International Development
VBDC	Vector Borne Diseases Center
VBDU	Vector Borne Diseases Unit
WHO/SEARO	World Health Organization / South East Asia Regional Office
Y	Implementing Year (for CAP-M project)

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1 EXECUTIVE SUMMARY

In Thailand, the PMI|USAID Control and Prevention of Malaria (CAP-Malaria or CAP-M) is implemented by University Research Co., LLC (URC). In Y4, CAP-M saw further shift the scope and coverage, implementing activities in 3 provinces including Ranong (Kraburi district in Y1 and La-un district in Y2) and in Chanthaburi (Pongnamron and Soidao districts in Y1), and the addition of Sakaeo (Klonghat district in Y4). With the recommendations from USAID/RDMA, the addition new district is to have parallel malaria control and prevention activities in Klonghat district with the pre-elimination efforts in Sampav Loun Operational District, Cambodia.

To maintain LLIN coverage, particularly among migrant workers, CAP-M plan to conduct systematic monitoring of LLIN coverage and use in the 8 villages in Ranong province and 6 villages in Chanthaburi that received LLIN in Y3 and Y4. The approaches include HH LLIN's census and distribution of HH to target residents and of farm owners to target migrant workers. CAP-M has adopted the Lot-Quality Assurance Sampling method to randomly select household to determine coverage and use in between annual distribution campaign. In this reporting period, the data collection tools and SOPs were developed and will be used starting Y4 Q3.

CAP-M established a network of bi-lingual village volunteers and migrant volunteers to better target interventions to migrant workers working in Thailand. The Twin-Cities model of collaborations in malaria control and prevention has demonstrated early success in setting up priorities and joint activities related to Malaria. Whenever possible, CAP-M leverages local resources or build on local initiatives to promote cross-border collaborations to include activities relevant to malaria control and interventions at the provincial level and extending to district level.

CAP-M provided technical support to the government-to-government (G2G) PMI|USAID supported SPAC project awarded to the Bureau of Vector Borne Diseases (BVBD). In Y4, the scope of technical assistant is limited to Therapeutic Efficacy Surveillance (TES) Study. Through the technical support, additional tools were developed to document adverse effects, monitoring and supervision plan was developed and joint monitoring visit conducted. Results are shared with regional platform or Artemisinin Resistant Malaria (ARM) regional database hosted by the World Health Organization / South East Asia Regional Office (WHO/SEARO).

2 PROGRAM PERFORMANCE/ACHIEVEMENTS AND KEY CHALLENGES ENCOUNTERED DURING REPORTING PERIOD BY THEMATIC AREA

Mobile and migrant population (MMP): Non-Thai migrants are hard to reach because of their employment insecurity and illegal status. Their mobility and limited knowledge of local resources mean they may be unable to access health services and often excluded from net surveys and distribution. Migrant often travel with little personal belongings including bed nets. CAP-M engages with private employers to serve these migrant communities.

CAP-M trained migrant volunteers (MVs) to provide outreach to migrant communities. These MVs work with MPWs and health staffs during outreach activities. The MVs also assist the Vector Borne Disease Unit (VBUD) staff with case investigation of migrant patients to ensure that information are gathered during case interview to determine transmission foci. This information can be used to target appropriate responses to disrupt malaria transmission.

Malaria diagnosis/treatment in ARM hotspot: Scale-up of early diagnosis and treatment

(EDAT) services is a one of the key strategic approach for malaria control in ARM hotspots. CAP-M activities aim to expand existing EDAT services to the community, promote uptake of services among particularly among migrant communities, and promote quality EDAT to ensure communities appreciate and adopt these available services. The scale-up of EDAT services at the community has largely been through the support of external resources such as the Global Fund for AIDS, TB, and Malaria (GF) and President's Malaria Initiatives (PMI) and United States Agency for International Development (USAID). To maintain the gain from these efforts, malaria control program will have to compete with other public health problems including chronic infections, emerging zoonotic disease, and non-communication diseases. CAP-Malaria has been addressing this issue since the start of the project through advocacy and working closely with health authorities to promote local ownership.

For example, in La-un CAP-Malaria trained Malaria Post Workers (MPW) and migrant volunteers often work side by side with health staff during malaria outreach activities, providing HE, malaria screening and DOT. One of CAP-Malaria trained MPW became an employee at a Health Promotion Hospital (HPH) to provide malaria EDAT services to the community through District Health Office budget. Another CAP-Malaria migrant volunteers was hired by District Health Office to serve as translator for Burmese patients at the hospital.

An approach to integrate malaria with primary health services was initially challenging to set up due to resistance to the increase workload, competing disease priorities, and lack of malaria commodities allocated to HPHs. Through advocacy with strategic information, the EDAT services was expanded in selected HPH in Ranong and in Chanthaburi in Y3. Malaria commodities were leveraged from GF-SSF (GF Single Stream Funding). In Y4, some of the CAP-M trained HPHs were transferred to GF Regional Artemisinin Initiative (GF-RAI).

Technical assistance: In Y4, CAP-M provided technical assistance (TA) to BVBD is focused on TES studies in 10 study sites. The challenges is that BVBD is often understaff. CAP-Malaria also conducted joint monitoring and supervision visit with several BVBD staffs, including junior level staff, working TES in order to develop human resources.

Private sectors (PSs): Migrants make up 50% of the malaria cases. The health staffs have limited capacity to target services due to language barriers. Though migrant workers are mobile while searching for job opportunities, they often minimized their day-to-day mobility once they find employment as a result of social, legal, and economical barriers. Often time they will rely on their employers for obtaining daily items or transportation to health facilities when sick. CAP-M has engaged businesses to be proactive in increase access to malaria services (and health services) to their migrant workers. CAP-M started distribution of LLINs to migrant through farm owners. In addition, continuous advocacy activities are needed to reach out to business sectors during community outreach and net monitoring activities.

Cross-border collaboration: Challenges remain the slowness in coordination, particularly in Burma and Cambodia where vertical program is quite strong and that a change in district and township health staff would require previous agreements to be revisited. CAP-M is working closely with counterparts to promote flexibility and direct coordination between Twin-Cities. Despite challenges, continuous engagement with bi-lateral counterparts at national, regional, and local levels has reflected in development and implementation of coordinated workplan between Kawthoung-Ranong and Pailin-Chanthaburi. The Twin-Cities activities are expanded to include Sampav Loun – Sakaeo.

Budget for CAP-M Thailand activities: Following a brief sanction of USG funds to Thailand government staff in Y3, CAP-Malaria was able to leverage resources to carry out activities including resources from local the Ranong Provincial and La-un District Health

Offices. CAP-M advocated for continuous MP activities where former workers became volunteers and dedicated their services. Following the relief of sanction, MPWs continued in Y4 operates at 50% less resources than GF-supported MPWs.

In Y4, CAP-M continues to experience reduced funds. CAP-M managed through good relations with local government staff to conduct activities with small funds through intensive advocacy and leveraging resources from partners. For example, stakeholder's meetings are conducted with engagement of GF-SSF, while RDTs/ACT to support expansion of EDAT services at HPHs are leveraged from GF-RAI. Twin-Cities coordination meeting between Ranong-Kawthoung, now leveraged resources from local health offices and Thailand International Development Agency (TICA), Ministry of Foreign Affairs. However, funding from TICA based on annual proposal from PHOs and depends on TICA's strategic interests.

3 PROGRAM PERFORMANCE DURING REPORTING PERIOD

3.1 Program overview

CAP-Malaria has 4 program objectives:

1. To increase access and uptake of malaria prevention through scale-up of village-level community engagement
2. To increase availability and accessibility of malaria services (diagnosis and treatment and compliance to treatment), and to increase uptake of these services among intended users, through engagement with local public health offices and non-health sectors
3. To facilitate use of malaria information in responses to local situation and context
4. To support Twin-Cities model for cross-border collaborations in malaria control and prevention in target border provinces

The 5 Intermediate Results (IRs) to achieve the 4 program objectives fall under the following key thematic areas

- **Malaria prevention**
 - IR1: Use of preventive interventions among community-at-risk increased
- **Malaria case management (treatment and diagnosis)**
 - IR2: Use of quality malaria diagnostics and appropriate treatment increased among malaria patients in CAP-M areas
- **Facilitate use of malaria information**
 - IR3: Use of Strategic Information for decision making increased at national, regional and local level
 - IR4: Malaria control services for mobile populations strengthened through inter agency and regional collaboration
 - IR5: BVBD's SPAC 2 TES component conducted according to timeline (Technical Assistance)
- **Support Twin-Cities model for cross-border collaborations in malaria control and prevention in target border provinces**

- ### 3.2 Coverage Area

Figure 1. Thailand map showing the four provinces and districts (marked with yellow star symbols) where CAP-M is implementing activities in Y4



Table 1: Population and population at risk (Thai) in the proposed target districts

Provinces (1)	District (2)	Total local Residents (3)	Pop at risk by stratification (Area: A1+A2) (4)	Total Village (5)	A1 Village (6)	A2 Village (7)	% of at risk population (8)
Ranong	Kraburi	46,742	31,446	60	3	41	67.3%
	La-un	14,044	7,003	30	0	17	49.9%
Chanthaburi	Pongnamron	42,689	23,973	47	4	32	56.2%
	Soidao	67,072	10,424	68	2	20	15.5%
Sakaeo	Klonghat**	36,094	937	69	0	4	2.6%
Total in coverage area		206,641	73,783	274	9	114	35.7%

(3) Mid-year census in June 2014 for Ranong; (4, 6, 7) is based on 2013 malaria stratification from BVBD in July 2014.

**Situation analysis to be conducted to assess needs and gaps

3.3 Malaria prevention

Community level distribution

In Y4 Q1-2, CAP-M distributed 585 LLINs where gaps were assessed after consultation with the local DHOs and VBDUs as summarized in Table 1. These LLINs were from the remaining stock of 1st lot of LLIN procured for Y3.

A total of 10,000 LLINs was procured by USAID DELIVER/JSI for CAP-M in Y4; these LLINs arrived in March 2014 and has been distributed to the targeted districts. LLINs distribution campaign is planned for Y4 Q3.

Table 3: Summary table for LLIN distribution to HH (Thai + Migrant) in La-un district (Ranong) and Soidao/Pongnamron districts (Chanthaburi) Y4 Q1-2

(Ranong) and Soidao/Pongnamron districts (Chanthaburi) Y4 Q1-2											
Village	Village Name	Total HH	Total Population					LLIN already own	Person per LLINs (Before)	Total LLINs distributed	Person per LLINs (after)
			Thai		Migrant		Total Pop.				
			M	F	M	F					
Moo 3	Bangsongthong, La-un	70	89	88	55	47	279	38	7.34	151	1.48
Total in Ranong		70	89	88	55	47	279	38	7.34	151	1.48
Moo 2*	Saikhao, Soidao	83	172	146	48	21	387	-	∞	241	1.61
Moo 5*	Ban Subtamao, Pongnamron	9	5	4	106	80	195	-	∞	193	1.01
Total in Chanthaburi		92	177	150	154	101	582	-	∞	434	1.34
Total LLIN distributed in Y4 Q1-2										585	

Note: *Distribution new arrival migrants following notification from MVs.

Monitor on net coverage and net use in selected CAP-Malaria target villages

In Y3, CAP-M conducted a follow-up LLIN census to assess whether LLINs previously distributed to the communities still remain. CAP-M staff and volunteers return to the village to repeat the LLIN census (>80% HH/farm coverage), within 6 months after the initial census and distribution campaign. Results were entered, cleaned-up, and analyzed in Y4, and summarized in Table 4.

Table 4: Comparison of LLIN coverage between census and distribution campaign and a follow-up census during Y3 in selected villages in Kraburi district and Pongnamron district

Village No.	Village Name	Census (person/LLIN)*	Follow-up (FU) Census (person/LLIN)**	FU Census HH/Farm coverage	Population Change (Migrant)	% LLIN Change
Moo 7	Klong ngoen, Pak Jun, Kraburi	Q1 (1.1)	Q3 (1.8)	81%	-14%	-32%

Moo 10	Lumphorlang, Pak Jun, Kraburi	Q1 (1.1)	Q3 (1.7)	100%	+26%	-24%
Moo 5	Ban Subtamao, Pongnamron	Q2 (2.1)	Q3 (3.1)	100%	-85%	-32%
Moo 7	Ban Klongkhat, Pongnamron	Q1 (0.9)	Q3 (8.7)	100%	-28%	-93%

* Estimated LLIN coverage (person / LLIN) after census and distribution.

** Estimated LLIN coverage (person / LLIN) after follow-up census.

Our observation indicates that migrant populations can fluctuate significantly depending within a short period of time. Ban Subtamao (Pongnamron) had 85% less migrants staying in the village, in Q3 than in Q2. Q2 is coincide with Durian harvest season (April and peak in May) which followed by Songkran Holiday in mid-April (New Year) where most of Cambodian migrants return home. Another reason, as previously mentioned in the report, the unwarranted rumors of government crackdown on migrant workers also led to large exodus of Cambodia migrant workers.¹

Overall, Kraburi experienced lower change of migrant population, suggesting that the Burmese migrants tend to stay longer in Thailand. The employment in Kraburi is mostly related to rubber farming (peak season from April to end of February). In Moo 10, Lumphorlang, Kraburi, we observed in increase in migrant population. This can be explained in part by 5 additional farms included the FU census but not in the initial census. Nevertheless, negative LLIN percent change suggests that departing migrants also took LLINs with them, and new arrival do not have sufficient access to LLIN as suggested by the poorer LLIN coverage during follow-up census.

Despite that caveat that we could not track individual migrant workers and individual LLINs distributed, the information suggests that a significant proportion of LLINs distributed to the community (mostly migrants) do not remain in the target villages, and that it is likely that existing migrants took the LLINs with them. This is reflected in the reduction in no. of LLIN remaining and the percent loss, as well as the coverage (person / LLIN).

Although the follow-up census activity required significant amount of resources, the efforts informed CAP-M and local partners that annual LLIN campaign is not adequate to maintain high LLIN coverage, particularly among migrant population. A simple monitoring system, a Lot Quality Assurance Sampling² (LQAS) method, was introduced for monitoring LLIN coverage and use. CAP-M updated the Standard Operating Procedure (SOPs) to include quarterly LQAS in Q1-2. In Feb 2015, CAP-M Field Coordinators (FCs) were trained on the updated SOPs³. The training also included field practices of data collection tool in Ranong with a few volunteers. Observations from the exercise was translated to improve SOPs.

Community-level BCC/IPC

(Community-level promotion of malaria prevention including ITN care and use)

BCC activities to promote regular use and appropriate care of insecticide treated bed nets (ITNs) include Interpersonal Communication (IPC) activities, community outreach and

¹ <http://www.economist.com/news/asia/21604585-rumours-drive-hundreds-thousands-cambodians-back-home-exodus>, accessed on April 30, 2015.

² Biedron C., et al. (2010). *International Journal of Epidemiology*, 39:72-79.

³ CAP-Malaria, SOPs for LLIN distribution and monitoring. (Last updated on February 2015)

mobilization, and advocacy. CAP-M recruited and trained migrant volunteers (MVs) to conduct individual and group IPC HE during home visits or community outreach activities in target districts. CAP-M also maximized the opportunities to engage existing village health volunteers (VHVs who are already part of the public health system) in target villages in malaria control and prevention activities. Motorcycle taxi ambassadors were trained to provide information on malaria risks and available malaria services to migrant passengers. Bi-lingual (Thai-Burmese and Thai-Khmer) pamphlets are used to help communicate with Thai and migrant communities. Bi-lingual sign-posts are placed in strategic locations such as motorcycle stops, formal and informal border crossing, and main roads which can be viewed by Thai residents and non-Thai migrants.

Key behavioral changes among these groups are (1) promote utilization of malaria services (early diagnosis), (2) improve compliance to follow-up and treatment, (3) improve knowledge and adoption of positive behaviors in malaria prevention; (4) increase awareness of drug resistant malaria, (5) care and use of LLINs.

Malaria ambassadors on wheels in Kraburi District, Ranong

Motorcycle Taxi is the most popular modes of transportation for migrant workers as they cannot obtain driver's license. CAP-M-trained motorcycle taxi volunteers to provide information on malaria prevention, particularly about health facilities providing free malaria diagnostic and treatment services. A refresher workshop for 87 motorcycle taxi drivers was organized to (1) inform motorcycle taxi drivers of new Malaria Posts supported by GF-RAI in Kraburi, (2) to motivate volunteers and ensure participants, and (3) to provide other health information at the request of Kraburi DHO. The workshop allowed motorcycle taxi volunteers to practice communicating in Burmese on key messages. Karaoke style scripts were provided to practice key malaria messages, particularly where passengers should go when they experienced fever, such as "You can get free malaria service at this location" or "Come to this location when you have fever for free malaria test". Techniques such as point out to the passengers the location of HFs offering malaria service along the way to promote availability of free services to migrant communities working or visiting Thailand.



CAP Malaria conducted a refresher workshop for 87 motorcycle taxi drivers who volunteered to help provide information on malaria services and information to their customers who are largely Burmese migrants. Photo: Winai Karnsrisupa, December 2014.

Table 5: Summary table of passengers reached by motorcycle taxi volunteers (Non-IPC)

Month	Annual target	Thai		Total Thai	Migrant		Total Migrant	Total
		M	F		M	F		
Total in Q1	-	140	279	419	3239	3103	6342	6761
Total in Q2	-	114	165	279	1916	1765	3681	3960
Grand Total	15,000	254	444	698	5155	4868	10023	10721

Migrant Volunteers (MV)

MV's roles include providing HE, and supporting the staff from MPs, HPHs and VBDU as they conduct their routine activities including translation during case investigation and community outreach by ensuring easier access to the migrant communities.

CAP-M trained MV to help VBDU staff during case investigation interview as this will be important for determining transmission foci and appropriate responses; the training was done

in collaborations with VBDU and CAP-M/Burma team from Kawthoung. Engagement of Burmese Staff and Twin-Cities counterparts is to not only to ensure that MMV understands the question they will translate and why and that they can communicate effectively between migrant patients and VBDU staff, but also to promote cross-border collaboration. CAP-M will be tracking (in Y4) on the improvement in case investigation.

MVs are requested to conduct home and farm visits to provide IPC HE to Burmese migrants in their community. At the monthly meeting with MVs, CAP-M staff collect HE report form, update information or local events about the community such as special events or new migrant arrivals or departures, and practice giving HE talks. MVs are notify about upcoming community outreach activities which may require their help to promote.

Table 6: Summary of HE by IPC for Y4, Q1-2

Field site	Quarter	Annual Target	Thai		M1		M2		Total people reached by HE			No. of Pamphlet distributed
			M	F	M	F	M	F	M	F	Total	
Total for Chanthaburi		-	663	608	345	286	414	342	1422	1236	2658	1184
Total for Ranong (La-un)		-	10	24	687	516	134	114	831	654	1485	300
Total HE by IPC Y4 Q1-2		20000	673	632	1032	802	548	456	2253	1890	4143	1484

CAP-M looked for opportunities to take advantage of community events such as religious ceremony and weekly markets where Thai and migrant workers, and cross-border villages would gather in groups. CAP-M worked with local governments including military and border polices, and village leaders on both sides of the border to add malaria outreach activities to local community events such as sport day or Buddhist festival day.

Table 7: Summary of HE by Community Outreach (Non-IPC) for Y4, Q1-2

Field site	Quarter	Annual Target	Thai		Migrant		Total
			M	F	M	F	
Community outreach activities	Q1	4000	0	0	350	237	587
	Q2		1	4	87	63	155
Total for Chanthaburi				1	4	437	300
Community outreach activities	Q1		56	84	227	272	639
	Q2		0	0	0	0	0
	Oct 2014		Malaria outreach in Ranong (Oct 2014)				116
Total for Ranong		4000	56	84	227	272	755
Total people reached by Non-IPC during Y4 Q1-2		8000					1,613

Note: Year 4 Annual Target of community outreach is "8000 people reached"

* 116 persons attended in Malaria outreach on 12 October 2014 in Ranong but data was not aggregated by sex or national status

Non-IPC by motorcycle taxi drivers is not included

Several factors contributed to the underperformance of this indicator (No. of people reached by IPC). One of the factor is a significant number of migrants had returned to their hometown following the announcement that the new Thai government plan to reform policy on migrant workers. The large exodus of migrants was also fueled by false rumors that government were cracking down on non-status or illegal workers. Another major factor for large numbers of migrant departure, particularly in Ranong, is the falling prices of rubber (as low as 50% reduction in prices). Our MVs are also vulnerable to these factors, and can be seen by the

number of volunteer dropout. Although CAP-M has trained more than 100 volunteers over the course of the projects (87 volunteers recruited by CAP-M, and others recruited by NGOs and DHO). As of Y4 Q1-2, CAP-M has a network of 51 active MVs.

Note: Y4 Annual target of VHV and MVs number is 28volunteers (1 pair of VHV and MV per target village)



CAP-Malaria conduct an malaria outreach activity at Pak Chan Suwankheeree temple, Kraburi. Malaria blood test was provided by VBDU (far left). Special malaria-themed activities for children included a malaria short film feature (middle left) and coloring activities (far right). Children read along as volunteer explain about malaria using education flip charts (middle right). Photo: Winai Kansrisupa, CAP-Malaria/Thailand, December, 2014



Night time is the best time to reach migrant workers. CAP-malaria team conducted nighttime outreach activity at Baan Khao Ta Bak, Moo 1, Pongnamron. VBDU provided free malaria blood test to migrant workers. Volunteers featured malaria short-film followed by malaria quiz game. Photo: Krittiya Sasipuminrit, CAP-Malaria/Thailand, December 2014.

3.4 Malaria treatment and diagnosis

Training of Health Facility (HF) staffs and community level workers (MPWs)

Integrated malaria services with primary health services at HPHs

The lowest unit of formal health service facilities in Thailand is the HPHs which did not offer malaria test and treatment services. Suspected patients are referred to Malaria Clinics (MCs) or MPs for malaria testing. Since there was no system to follow-up if the referred patients actually seek malaria tests immediate afterwards, these patients run a risk of delayed test and treatment that may lead to poor clinical outcomes, as well as potentially contributed to further malaria transmission.

CAP-M facilitated the integration of malaria case management services with the primary health services and antenatal services at the HPHs in Ranong (La-un district) and Chanthaburi (Soidao and Pongnamron districts).

Table 8: Training in Malaria Diagnostics (RDT and/or microscopy) for Y4 Q1-2, disaggregated by professional group and sex

Activities	Y4	
	Target	Result
Training on Malaria diagnostics	40	3
Health facility (HPHs, lab)		3
Male		1
Female		2

Table 9: Training in case management with ACT for Y4 Q1-2, disaggregated by professional

group and sex

Activities	Y4	
	Target	Result
Training on ACT case management	40	3
<i>Health facility (HPHs, lab)</i>		3
<i>Male</i>		1
<i>Female</i>		2

Underperformance in this reporting periods can be attributed to changes in local situation. Ranong PHO was informed in Q1 that GF-RAI have included EDAT in HPHs. After several rounds of negotiation, five out of the HPHs in La-un district facilitated by CAP-M since Y3 were transferred to GF-RAI⁴. Training were delayed since GF-RAI could not start implementation until February 2015.

Training activities in Chanthaburi was delayed by PHO due to competing interest which resulted from potential Ebola threat that followed when a local residents returned from a business trip in Africa experienced fever. The clinical outcome and subsequent investigation did not suggest Ebola (or malaria) threat.

Y4 target is expected to be achieved by Q3-4. See details for each province below:

Ranong – CAP-M will support training of 6 health staffs from 3 HPHs in late May 2015. Training will include malaria prevention, diagnosis using RDTs and treatment of uncomplicated malaria, and pregnant women in their first trimester during ante-natal visits. Refresher training for 3 MPWs will also be included.

Chanthaburi – In May 2015, a training workshop is planned for 40 HPH staffs (refresher and new) from all HPHs in malaria endemic districts in Soidao and Pongnamron districts. The rational for expansion of this activity is the closure of one VBUD/MC in Pongnamron.

Sakaeo – CAP-M successfully advocated for the expansion of integrated malaria services at all 5 HPHs in Klonghat district, which shares border with Sampav Loun, Cambodia. Training is scheduled for April 2015 with participation from Vector Borne Diseases Center (VBDC), VBUD, and DHO. The rational for expansion in Klonghat is that there is no MP or BMPs, or MC in the district. Sakaeo is not in GF-RAI workplan.

Integration of malaria services with primary care and ante-natal care at HPHs, in Ranong and Chanthaburi, is another successful demonstration of CAP-M strategy for sustainable malaria control and prevention efforts.

Case finding and treatment

In this reporting period, CAP-M supported 3 Malaria Posts (MPs) in La-un district that provide direct malaria screening and treatment services, and support for monitoring of malaria services at 3 HPHs in La-un district and 10 HPHs in Pongnamron and Soidao district.

⁴ The strategy was adopted into GF-RAI, however, their actual start delayed until February 2015. Five HPHs out of 8 HPHs in La-un district will be compensated with 1,000 THB per month to “maintain existing” malaria test and treatment services previously facilitated by CAP-Malaria at no cost.

EDAT at Malaria Posts (MPs) in La-un District, Ranong

Following the military coup on May 22, 2014 (Y3 Q3), CAP-M was advised to halt direct assistant Thailand government and government staff, which included support to PHO/DHO to maintain and supervised MPWs and HPHs. CAP-M conducted situation review and discussed options with PHO/DHO. As a result, the following plan were adopted under the agreement with PHO/DHO and MPWs in La-un district.

- In addition to maintaining EDAT in their home, MPWs will conducted home/farm visits or outreach HE activities at least 3 times per month. MPWs were compensated 1,500 THB per month for their passive case detection activities and outreach activities directly by CAP-M to accommodate disbursement restrictions through government staff. The new incentive structure represent 50% reduction in cost.
- CAP-M assumed the monitoring and supervision role, while engaging with DHO.
- The rationale is that following military coup, there was widespread (though unwarranted) fear among migrant communities which may have affected their decision to move around and seek health services. When possible, MPWs would pair with MVs to conduct outreach in the village and among migrant community.

In Y4 Q3-4, CAP-M will resume the strategy to support DHO to supervise MPs (and HPHs) in responses to the ease in restriction of USG support to government staffs. The monthly monitoring and supervision by DHO includes collection and review of monthly information for timely submission to the MIS, and checking of malaria commodity supplies.

Table 10: Summary of case finding by MPs in La-un district, Y4 Q1-2, compared to the same period in Y3

	Thai				M1				M2				Total			
	Total exam	Test Result			Total exam	Test Result			Total exam	Test Result			Total exam	Test Result		
		Pos.	Pf	Non-Pf		Pos.	Pf	Non-Pf		Pos.	Pf	Non-Pf		Pos.	Pf	Non-Pf
Total Y3 Q1-2	89	3	0	3	116	9	0	9	54	2	0	2	259	14	0	14
Male	49	3	0	3	62	5	0	5	28	0	0	0	139	8	0	8
Female	40	0	0	0	54	4	0	4	26	2	0	2	120	6	0	6
Total Y4 Q1-2	199	0	0	0	204	0	0	0	0	0	0	0	403	0	0	0
Male	92	0	0	0	108	0	0	0	0	0	0	0	200	0	0	0
Female	107	0	0	0	96	0	0	0	0	0	0	0	203	0	0	0

Note: Non-Pf patient received the same treatment as Pv patient.

Table 11: Summary of case finding by HPHs in La-un district, Y4 Q1-2

	Thai				M1				M2				Total			
	Total exam	Test Result			Total exam	Test Result			Total exam	Test Result			Total exam	Test Result		
		Pos.	Pf	Non -Pf		Pos.	Pf	Non -Pf		Pos.	Pf	Non -Pf		Pos.	Pf	Non -Pf
Total Y4 Q1-2	20	0	0	0	42	1	1	0	6	1	1	0	68	2	2	0
Male	14	0	0	0	28	0	0	0	5	0	0	0	47	0	0	0
Female	6	0	0	0	14	1	1	0	1	1	1	0	21	2	2	0

Note: No data from Y3 for comparison as activity started in Q3. Non-Pf patient receives the same treatment as Pv patient.

Fear of deportation arising from political instability in Thailand and decrease market prices for rubber prices led a significant portion of migrants to return to their home country. These

events may have contributed to lower number of M2 tested in this reporting period (0% of total screened by La-un MPWs), compared to the same period in Y3 (21% of total screened by La-un MPWs). Migrants still makes up 50-65% of patient served at MPs.

Table 12: Summary of case finding by 10 HPHs in Soidao and Pongnamron district, Chanthaburi province Y4

HPH at Chanthaburi	Thai				M1				M2				Total			
	Total exams	Test Result			Total exams	Test Result			Total exams	Test Result			Total exams	Test Result		
		Pos.	Pf	Non -Pf		Pos.	Pf	Non -Pf		Pos.	Pf	Non -Pf		Pos.	Pf	Non -Pf
Grand Total	93	3	1	2	18	2	1	1	11	1	0	1	122	6	2	4
<i>Male</i>	39	0	0	0	6	1	0	1	2	1	0	1	47	2	0	2
<i>Female</i>	54	3	1	2	12	1	1	0	9	0	0	0	75	4	2	2

Note: Comparison not available, activity started Q3. Non-Pf patient received the same treatment as Pv patient.

In the 1st two quarter of implementation, approximately 76% of patients tested for Malaria at 10 selected HPHs in Chanthaburi are Thai. There were 93 suspected Thai patients screened and 3 malaria cases (1 *Pf*, 2 non-*Pf*, 5.0% MPR) identified and referred for treatment at MCs. On the other hand, 29 migrants were screened and 3 cases (1 *Pf*, 2 non-*Pf*, 10.3% MPR) were identified and referred for treatment at MCs.

In all cases, VBDU is notified directly by HPHs on the same day patients are diagnosed and referred. In Chanthaburi, the decision to notify and refer patients to MC for treatment was discussed in length with PHO, DHO, and VBDU. The local consensus was to emphasize on DOT and foci investigation with VBDU staff to provide the local implementation lead.

3.5 Facilitate use of malaria information

Kraburi – CAP-Malaria supported joint malaria outreach and distribution of LLINs, particularly to villages with large number of migrants. Motorcycle taxi and MVs promote use of free EDAT services when suspected of malaria. These activities may contribute to the reduction of slide positive rate (SPR) among migrants (M1 and M2).

La-un – Support of MP and expansion of EDAT in HPH in Y3 was due to increase malaria burden, particularly higher proportion of *Pf* among malaria cases. The increased coverage of LLINs and vector control (IRS through La-un District budget) and expansion of malaria services may have contributed to reduction of malaria cases particularly for *Pf* infection.

Pongnamron and Soidao – Although the caseload is small, the local team did noticed a cluster of *Pf* cases among migrants in Jan/Feb 2015. CAP-M/Thailand notified CAP-M/Cambodia to review malaria data in Pailin and Sampov Loun operation districts which shared border with Pongnamron and Soidao. Though proportion of *Pf* did not increase in Pailin, but a small increase was shown in Sampov Loun during the same period. CAP-Malaria facilitated exchange of information include results from case investigation conducted by twin-cities counterparts. Among M2 proportion of *Pf* cases during this reporting period was 11% in Pongnamron and 30% in Soidao (compared to 5% and 7% in FY2013, respectively).

Table 13. Summary of all Malaria Tests and Cases (ACD+PCD) (by districts) among Thai and non-Thai migrants reported FY2013^a compared to FY2014^a

Kraburi, Ranong	FY2013 (Oct 2013 – Sep 2014)				FY2014 (Oct 2014 – Mar 2104)			
	Thai	M1	M2	Total	Thai	M1	M2	Total

Number of malaria tests	14,932	11,449	4,346	30,727	17,262	18,915	3,626	39,803
Number of positive	380	274	588	1,242	185	159	267	611
%Pf	17.37	24.82	43.71	31.48	14.59	21.38	18.35	18.00
%Pf gam	0.00	0.00	1.95	1.28	0.00	0.00	0.00	0.00
อัตราการพบเชื้อ (SPR)	2.54	2.39	13.53	4.04	1.07	0.84	7.36	1.54
La-un, Ranong	2013				2014			
	Thai	M1	M2	Total	Thai	M1	M2	Total
Number of malaria tests	3,958	3,891	250	8,099	3,627	5,993	184	9,804
Number of positive	113	138	43	294	71	109	18	198
%Pf	76.99	59.42	25.58	61.22	38.03	39.45	22.22	37.37
%Pf gam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
อัตราการพบเชื้อ (SPR)	2.85	3.55	17.20	3.63	1.96	1.82	9.78	2.02
Pongnamron, Chanthaburi	2013				2014			
	Thai	M1	M2	Total	Thai	M1	M2	Total
Number of malaria tests	7,567	95	9,340	17,002	10,060	44	5,745	15,849
Number of positive	51	1	20	72	21	0	9	30
%Pf	3.92	0.00	5.00	4.17	0.00	0.00	11.11	3.33
%Pf gam	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
อัตราการพบเชื้อ (SPR)	0.67	1.05	0.21	0.42	0.21	0.00	0.16	0.19
Soidao, Chanthaburi	2013				2014			
	Thai	M1	M2	Total	Thai	M1	M2	Total
Number of malaria tests	6,746	0	14,868	21,614	7,439	0	17,882	25,321
Number of positive	19	0	29	48	7	0	10	17
%Pf	0.00	0.00	6.90	4.17	0.00	0.00	30.00	17.65
%Pf gam	0.00	0.00	50.00	50.00	0.00	0.00	0.00	0.00
อัตราการพบเชื้อ (SPR)	0.28	0.00	0.20	0.22	0.09	0.00	0.06	0.07

^a MIS (BIOPHIC) accessed on April 26, 2014.

Technical Support on Therapeutic Efficacy Surveillance (TES) Studies

TA focused on completion and submission of 4 TES proposals, implementation, site monitoring and training plans (milestone 1) to PMI/USAID/RDMA and the ethical committee. Monitoring visits were conducted to the sites. Meetings were held with PHO and VBDC on strengthening the linkages and referral from the MPs, district hospital and MCs.

Please refer to Annex 2 for detail summary on TA and site monitoring visits.

3.6 Twin-Cities model for cross-border collaborations

Kawthoung – Ranong

Please refer to Section “B.4.1 enabling environment strengthened, B4.1.a. Twin-Cities Collaborations” in the Burma component of Semi-Annual Progress Report, Y4 Q1-2, for more details of activities.

Highlights include:

- Expansion of Twin-Cities collaborations to engage not only the provincial levels but also the district and community levels.
- Twin-Cities activity to assist Thai DHO to properly trained Burmese MVs
- Support Buddy Volunteer network between VMWs (Kawthoung) and MVs (Ranong) with the objectives to (1) mobilize communities on the borders on malaria awareness and engagement in malaria control; (2) inform health workers of local events, activities, or situations that may have an effect on health, (3) motivate migrant volunteers to stay engaged while living or working on either sides of the borders; and lastly (4) potential for expanding service points on both sides for malaria patients to complete DOT and FU.
 - o The cross border buddy volunteer network meets on a bi-monthly schedule since September 2014. Malaria Inspector from Kawthoung and representatives from DHOs are invited.
 - o Joined efforts by volunteers to conduct outreach HE activities
 - o Send updates on malaria, health news, and other information through SMS between buddy volunteers living in paired border villages



Buddy volunteers from Kraburi and Kawthoung conduct outreach activities at the annual Kraburi boat race. (Left) Volunteers paraded through the festival with loudspeakers informing participants about malaria risk and prevention. (Middle) CAP-Malaria staff interview a Burmese mother about her malaria knowledge in front of a crowd. (Right) A young CAP-Malaria migrant volunteers passing out pamphlets to participants. Photo: Winai Kansrisupa, CAP-Malaria, December 2014.

Pailin – Chanthaburi and Sampov Loun – Sakaeo

Please refer to Section “2.3.2 Multi-sectoral collaboration and coordination promoted: Twin-Cities Collaboration” in the Cambodia component of Semi-Annual Progress Report, Y4 Q1-2, for more details of activities.

Highlights include:

- Twin-Cities meeting (December, 17, 2014) conducted in Sampav Loun, Cambodia, led by Battambang Provincial Health Department and Sampav Loun Operational District Health. A draft report is available through CAP-M website (www.capmalaria.org). A final report, endorsed by Twin-Cities counterparts will be available through the same channel.
- **Monthly data sharing**
 - o Pailin and Chanthaburi is done regularly
 - o Sampav Loun and Sakaeo will also share information.
 - o Sharing will expand from Malaria to include 15 infectious diseases. CAP-M will facilitate drafting of Letter of Agreement between Twin-Cities counterparts.

- **Bilingual patient appointment cards** introduced in Pailin-Chanthaburi since late 2013 for use at health centers in Pailin and at MCs in Pongnamron and Soidao. Exchange visit has been organized in to observe use of card. A more formal assessment and lesson learned is planned for Y4 Q4.

Bi-lingual patient life course (at HPHs) and IEC material on side-effects of Primaquine (PQ) are in the final stage of development. Although these posters will be used in project target provinces in Chanthaburi and Sakaeo, the development engages Twin-Cities counterparts as target audience are Cambodian migrant workers. The purpose of the life course poster is to reduce migrant patient's anxiety when accessing services at formal HPHs. Thailand's NTG for *Pf* and *Pv* include PQ regimen. Cambodian population carry higher level of G6PD mutations than other SE Asian population, yet promote of potential PQ side effects has not been included as part of health staff training or for BCC activity in Thailand. Both posters will be finalized and printed in May 2015. Twin-Cities counterparts will be part of the field testing planned in June 2015.

4 SUCCESS STORIES

In this reporting period, CAP-Malaria success story will feature Ms. Pranom Gingwan, one of CAP-M trained Thai MPW who was able to gain full-time employment with Bangkaeo Nai HPH. Her training and experience working with CAP-Malaria has allowed her to contribute to her community and recognized by the local health staffs and DHO.

Please refer to Annex 3 for her story.

5 ANNEXES

5.1 Annex 1 – Quantitative targets for Y4 and results for Y4 Q1-2

Table 14: Quantitative Targets and Results (Oct 2013 – Mar 2014):

Project Performance Results from October 1, 2014 to March 31, 2015

No.	Indicators	Target	Actual
F Indicators			
1	Number of ITNs purchased in any fiscal years with USG funds that were distributed in this reported fiscal year (OP1 F)	10,000 (plus 1076 LLINs from Y3)	1,076
2	Number of health workers trained in case management with Artemisinin-based combination therapy (ACTs) with USG funds (OP2F)	40	3
	<i>Male</i>	-	1
	<i>Female</i>	-	2
	Number of health facility workers trained	37	3

	<i>Male</i>	-	1
	<i>Female</i>	-	2
	Number of community-level workers trained	3	0
	<i>Male</i>	-	0
	<i>Female</i>	-	0
3	Number of health workers trained in malaria laboratory diagnostics (rapid diagnostic tests or microscopy) with USG funds (OPF3)	40	3
	<i>Male</i>	-	1
	<i>Female</i>	-	2
	Number of health facility workers trained	37	3
	<i>Male</i>	-	1
	<i>Female</i>	-	2
	Number of community-level workers trained	3	0
	<i>Male</i>	-	0
	<i>Female</i>	-	0
	Project Indicators		
4	Number of individuals reached with BCC messages through interpersonal communication (IPC) in CAP-M target areas (OP4)	20,000	4,143
	<i>Male</i>	-	2,253
	<i>Female</i>	-	1,890
4.1	<i>Number of individuals reached with BCC messages through non-interpersonal communication (IPC) in CAP-M target areas (Motorcycle taxi)</i>	15,000	10,721
	<i>Male</i>	-	5,409
	<i>Female</i>	-	5,312
4.2	<i>Number of individuals reached with BCC messages through non-interpersonal communication (non-IPC) in CAP-M target areas (Community outreach)</i>	8,000	1,497
5	Number of malaria tests performed (OP5)	-	593
	<i>Disaggregated by Sex</i>	-	593
	<i>Male</i>	-	294
	<i>Female</i>	-	299
	<i>Disaggregated by provider</i>	-	593
	<i>Reported by Health facility</i>	-	190
	<i>MPs supported by CAP-Malaria</i>	-	403
6	Number pf confirmed malaria cases detected through CAP-M supported facilities (OP6)	-	8
	<i>Disaggregated by Age</i>	-	
	Age < 5	-	0
	Age => 5	-	8
	<i>Disaggregated by Sex</i>	-	8
	<i>Male</i>	-	2
	<i>Female</i>	-	6

	By species (Microscope & RDT: HRP2Pf/Pan)	-	8
	Number of <i>Pf</i> cases	-	4
	Number of <i>Pv</i> cases	-	4
	Number of mix cases	-	0
	Disaggregated by provider	-	8
	Reported by Health facility	-	8
	MPs supported by CAP-Malaria	-	0
7	% of uncomplicated malaria cases treated according to national malaria treatment guideline in CAP-M target areas (OC5)	>90%	100%
	Number of uncomplicated malaria cases treated according to national malaria treatment guideline in CAP-M target areas (OP7)	-	8
	Other project indicators		
8	% of individual slept under ITN previous night (OC1) ⁵	>90%	-
	<5 years (OC2)	84%	-
	pregnant women (OC3)	100%	-
	Migrants (OC4)	85%	-
9	% of PMI/USAID assisted service delivery points that experienced stock out of first line ACT on date of visit (OC6)	>90%	100%
10	% of TES site achieved target enrollment (OC7) (Define as enrollment >50% of targets)	4	50%
11	% of SPAC-Malaria project milestone and reports submitted on-time to PMI/USAID/RDMA (OC8)	>90%	-

5.2 Annex2 – Summary of TA on TES activities and results, Y4 Q1-2

Study Title: Therapeutic Efficacy Study (TES) to evaluate the current first line antimalarial treatment for uncomplicated *Pf* and *Pv* malaria

Introduction:

Activities focused on completion, review and submission of the 4 TES proposal, implementation, site monitoring and training plans (milestone 1) to PMI/USAID/RDMA and to the ethical committee. Conducted monitoring visits to the sentinel sites. Meetings held with PHO, BVBD and VBDC on referral from the MP, district hospital and MCs.

The following provide a glimpse of the technical assistance and highlight specifically the achievements during this reporting period.

- Provision of technical and management support to the BVBD, MOPH for the TES implementation.
- *TES protocol for 4 treatment regimen*

⁵ Information from baseline migrant KAP surveys in Kraburi district, September 2013. Not that only the question asked “Did you sleep under bed net last night?” including convention and ITN to understand net use culture. Approximately 45% of people who reported sleeping under bed nets previous night, slept under ITNs.

- Continued the round 1 of the 2 TES Protocol namely:
 - The efficacy and safety of a 3 day Chloroquine for the treatment of uncomplicated *Pv* in the sentinel sites namely: Chanthaburi, Ranong and Tak.
 - The efficacy and safety of a 3 day Dihydroartemisinin-Piperaquine (DHA-PPQ) combination for the treatment of uncomplicated *Pf* in sentinel sites in Kanchanaburi namely: Thong Pha Phum, Lintin, Tha Sao and Lum Sum.
- For the continuation of round 1 TES protocol for the efficacy and safety of a 3 day Artesunate-Mefloquine (ASMQ) for the treatment of uncomplicated *Pf* in sentinel sites namely: Tak, Ratchaburi and Mae Hong Son has been discontinued due to the protocol delayed completion and approved by the ethical committee. A decision agreed by BVBD, PMI/USAID/RDMA and WHO.
- For the period II, completion and reviewed the 4 TES protocol, and will be conducted on the following sentinel sites:
 - Efficacy and safety of ASMQ for uncomplicated *Pf* treatment will be conducted in Prachuap Khiri Khan, Chumporn, Srisaket, Songkla, Surat Thani and Yala provinces. Surat Thani and Yala, are financially supported by GF.
 - Efficacy and safety of Dihydroartemisinin-Piperaquine for uncomplicated *Pf* treatment in Kanchanaburi, Ubon Ratchathani and Ranong provinces.
 - Efficacy and safety of Pyronaridine-Artesunate fixed dosed combination for uncomplicated *Pf* treatment will be conducted in Maesot, Tak province.
 - Efficacy and safety of Chloroquine for treatment of *Pv* will be conducted in Kanchanaburi and Srisaket provinces.

Monitoring:

In this reporting period, BVBD coordinated monitoring visit to: Kanchanaburi and Chanthaburi. The monitoring team comprised of BVBD, VBDC and the consultant

- The monitoring team continues to provide supportive supervision, guidance and mentor the site staff on the TES activities and support to strategically address the pressing challenges and issues encountered.
- Ensured that the site staff understands their current respective roles; essential documents are available and kept properly where other site staff have access; and have sufficiently study drugs and properly stored and materials available. Patient's information's are properly documented and completeness of the case report forms (CRF) and informs consent (IC).
- Monitoring checklist has been used to ensure that the sentinel site staff follows protocol and GCP requirements.
- The standardized forms such as screening/enrollment, participation forms and patient follow up tracking log has been used by the sentinel sites to provide a better system in data collection and tracking patients.

Table 15: Numbers of malaria cases in each site of TES program are summarized below

Sentinel Sites	Study commenced on	Target enrollment		Antimalarial Drug	Cumulative enrollment till March 2015		Loss to follow up
		<i>Pv</i>	<i>Pv</i>		<i>Pf</i>	<i>Pv</i>	
Kanchanaburi	February 2014	50	---	Dihydroartemisinin +Piperaquine (DHA-PPQ)	13	---	0
Tak		---	50	Chloroquine (CQ)	---	49	0

Chanthaburi	June 2013	---	50	Chloroquine (CQ)	---	23	2
Ranong	June 2013	---	50	Chloroquine (CQ)	---	42	4

Tools and materials produced

- In the Y3 Q3 of FY 2014, Monitoring Plan, screening/enrollment forms, patient follow up tracking logs and Adverse Event and serious adverse event form were developed and introduced at the sentinel sites and being used for tracking.
- Development of the document flow chart

Capacity building

Table 16: Summary of capacity building activities to BVBD on TES implementation

Capacity Building	Type of participants	Outcomes or Highlights
Monthly Meeting Project management	TES PI, Co-PI, TES coordinator, 4 study staff	The meeting reported the achievements, challenges/problems in the course of implementation were discussed and the areas for improvement Reviewed draft documents. Planned and prepared activities for the next 3 months, including program supervision and monitoring activities.
On the job training	18-Sentinel sites staff, 1 VBDC, 7 VBDCU	Focused on TES protocol, SOPs, used of the documents, forms and tracking logs and value of collecting data. Sentinel sites were satisfied with on the job training and found it useful.
Preliminary data analysis	2-study staff-BVBD	Reviewed hard copy of the case report form and e-data based.

Challenges:

- BVBD workload and other competing interest (e.g. vector borne disease, other malaria funded project) effect the available time for completion and submission of the TES protocol to PMI/USAID/RDMA and Ethic committee
- Limited human resources
- The ability to collect adequate sample sizes is more challenging as malaria cases decline
- Narrow inclusion criteria also reduce eligible patients for enrollment
- M2 patients are largely excluded due to difficulty in follow-up

Networking & Coordination

Due to the low number of enrolled patients at the malaria clinics, patient referral from MPs and hospitals are needed to increase sample pool. Follow on meeting held with the Provincial Health Office in Chanthaburi on the TES activities to strengthen the linkages and referral seek collaboration on patient referrals. BVBD and VBDC also plan to sensitize MPWs on TES activities and patient's referral to MC for potential study enrollment.

5.3 Annex3 – Success story, Y4 Q1-2

Success Stories/Lessons Learned Template
<i>One Story Per Template</i>

Instructions: Provide the information requested below. *Don't forget pictures.*

* **Program Element:** Health

* **Key Issues:** Malaria

Title: CAP-Malaria trained volunteers becomes a newest staff at a community hospital

Operating Unit: PMI/USAID CAP-Malaria, Thailand

Please provide the following data:

***Headline (Maximum 300 characters):** A good headline or title is simple, jargon free, and has impact; it summarizes the story in a nutshell; include action verbs that bring the story to life.

CAP-Malaria trained volunteers become the newest employee at Health Promotion Hospital

***Body Copy (maximum 5,000 characters):** The first paragraphs should showcase the challenge encountered and the context of the foreign assistance program. Presenting a conflict or sharing a first person account are two good ways to grab the reader's attention. Continue by describing what actions were taken and finally describing the end result. What changed for the person or community? What was learned? How did this make a difference in the community or to the country overall? If this story is relating to a "best practice", what were the innovations in planning, implementation or partnering that made it different? If this story is about an evaluation, what program adjustments were made?

While malaria has been eliminated from central Thailand, pockets of high malaria persist in border provinces including Ranong. These remote areas have limited health services, and the long trek to a facility for diagnosis can be a major barriers to early diagnosis and treatment.

In early 2013, Thailand's Vector Borne Diseases Center in Ranong, the Provincial Health Office, the American Refugee Committee, and the USAID/PMI Control and Prevention of Malaria Project (CAP-M), concerned at the high rates of malaria, took a closer look at the data. The results were highly concerning. Approximately two-thirds of malaria patients in La-un were positive for *Plasmodium falciparum* (Pf), while for other district in Thailand the proportion of Pf cases ranges from 30-40% of total malaria cases. La-un's rubber plantations employ a large number of Burmese migrant workers, an occupation which requires them to work at night, which is also when *Anopheles* mosquitoes are more likely to bite. Indeed, approximately two-thirds of malaria cases in La-un district are Burmese migrant workers. More alarming was that 25% of all Pf patients diagnosed in La-un had gametocyte form of the malaria parasites, while a neighboring district showed Pf gametocyte positive rate at 1.5%). Not only does the presence of gametocytes indicate delay in diagnosis and treatment which can have worse consequences for the patients, but it also has broader public health implications as these patients are "transmission reservoir" in their community. If a mosquito bites a person infected with gametocyte forms of malaria, it can lead to transmission of malaria to the next person it bites.

Early diagnosis and appropriate treatment of malaria cases is critical to ensure malaria does

not spread. The malaria control partners in Ranong launched a strategy to make it easier for residents and migrants alike to access malaria services. CAP-M supported La-un DHO to expand malaria service outlets at the community level through four new Malaria Posts and to integrate malaria services with primarily health care at Health Promotion Hospitals.

Malaria Posts are located in a Malaria Post Worker's home, strategically located in endemic villages near border crossings so migrants can stop by for screening and treatment. Sign posts along the roads direct travelers to the service site, where the trained malaria worker provides diagnosis of malaria using rapid diagnosis tests (RDT) and treatment with Artemisinin combination therapies (ACT). CAP-M also developed materials that provide malaria information in both Thai and Burmese, so the malaria workers can ensure their clients understand the importance of taking the entire three-day treatment, and a bilingual patient treatment card that the client can show to other health providers they visit either in Thailand or Burma.

Ms. Pranom Gingwan was one of La-un residents who volunteered to become Malaria Post Workers. She was trained by CAP-M in 2013 and provided malaria early diagnosis and treatment services from her home. Pranom put her heart and soul in providing services to her neighbors, Thai and Burmese. She volunteered to accompany health staffs during malaria outreach visits organized by CAP-M and by the Vector Borne Diseases Unit. Her commitment and ability to provide appropriate diagnosis and treatment impressed the District Health Officer who supervised her performance with support from CAP-M. She was recruited by the District Health Office to work as a full-time employee at the Bangkaeo Noi Health Promotion Hospital, where she also provide malaria diagnosis and treatment services.

"We are impressed with the Pranom's performance as Malaria Post Worker in the past year. The training and outreach experiences she received from CAP-Malaria definitely helped her improved her skillset. She also demonstrate good work ethics and genuine willing to help her community. It was no doubt that when a full-time employment opportunity for an assistant became available, that we would recruit her." – Mr. Nopporn Bumrung, Public Health Officer, La-un District Health Office

"I was nervous when I first become Malaria Post Worker. I learned a lot from CAP-Malaria training. Mr. Nopporn and Mr. Winai often come to visit and give me encouragement and advice. I never thought I would get a job in a hospital, and be able to use the skill in helping people to earn salary. I thought smart people with years of study can get work at the hospital. I'm so happy and proud to officially be a part of the health staff." – Ms. Pranom Gingwan, Office Assistant, Health Promotion Hospital, Bangkaeo Nai, La-un district

"I met Pranom back in 2013 when CAP-Malaria organized training for Malaria Post Workers. I remember she was nervous but she picked up information quickly and continue to improve. She really go out of her way to join CAP-Malaria outreach activities, even outside of her village. We (CAP-Malaria) support regular monitoring supervision vision by La-un District not only to ensure performance of MPWs and volunteers, but also to highlight their dedication and contribution to their community, to make these dedicated volunteers part of the health system. I'm very happy that CAP-Malaria training and supervision prepared Pranom to become a full-time health worker. It is a wonderful achievement and we (CAP-malaria) is proud to be a part her journey." – Mr. Winai Kansrisupa, CAP-Malaria, Field Coordinator / Ranong province

***Pullout Quote (Optional, 1,000 characters):** Please provide a quote that represents and summarizes the story.

“The training and outreach experiences she (Pranom) received from CAP-Malaria definitely helped to improve her skillset...It was no doubt that when a full-time employment opportunity for an assistant became available, that we would recruit her.” – Mr. Nopporn Bumrung, Public Health Officer, La-un District Health Office

“I learned a lot from CAP-malaria training. I never thought I would get a job in a hospital, and be able to use the skill in helping people to earn salary.” – Ms. Pranom Gingwan, Office Assistant, Health Promotion Hospital, Bangkaeo Nai, La-un district

“I’m very happy that CAP-Malaria training and supervision prepared Pranom to become a full-time health worker. It is a wonderful achievement and we (CAP-malaria) is proud to be a part her journey.” – Mr. Winai Kansrisupa, CAP-Malaria, Field Coordinator / Ranong province

***Background Information (3,000 characters):** Please provide whether this story is about a presidential initiative, Key Issue(s), where it occurred (city or region of country) and under what item(s) (Objectives, Program Areas, Program Elements) in the foreign assistance Standardized Program Structure. Include as many as appropriate.

The PMI|USAID Control and Prevention of Malaria (CAP-Malaria) project funded by PMI operating malaria intervention in 3 countries including Cambodia, Thailand and Burma. The project aims to contain the spread of multi-drug resistant *P. falciparum* malaria in the Greater Mekong Sub-region. The objectives of the project are:

- 1) Scale-up cost-effective vector control interventions to prevent malaria transmission;
- 2) Improve the quality and effectiveness of diagnosis and treatment of malaria at the community and health facility levels;
- 3) Reduce bottlenecks to implement and monitor malaria control activities; and
- 4) Support the establishment and maintenance of strategic information for malaria control.

In Thailand, CAP-M is supporting local authorities to expand interventions implemented in Ranong and Chanthaburi. The project supports community-level diagnosis and treatment, comprehensive malaria services for high-risk mobile and migrant populations including LLIN distribution, and strengthening coordination among local stakeholders to improve the accessibility and availability of malaria services among target groups.

***Contact Information (300 characters):** Please list the name of the person submitting along with their contact information (email and phone number).

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